

THE CONTENTS OF THIS
DOCUMENT ARE THE HIGHEST
QUALITY OBTAINABLE

INITIAL BAE DATE 10/15/92

4/30/92



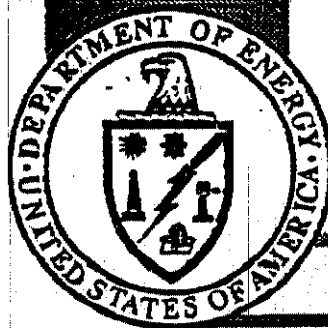
Environmental Restoration

ORIGINAL SIGNATURES INCLUDED

WINCO Environmental Restoration

Track 1 Decision Documentation Package
Waste Area Group 3
Operable Unit 2

Site CPP-62
Mercury Contaminated Area near CPP TB-4

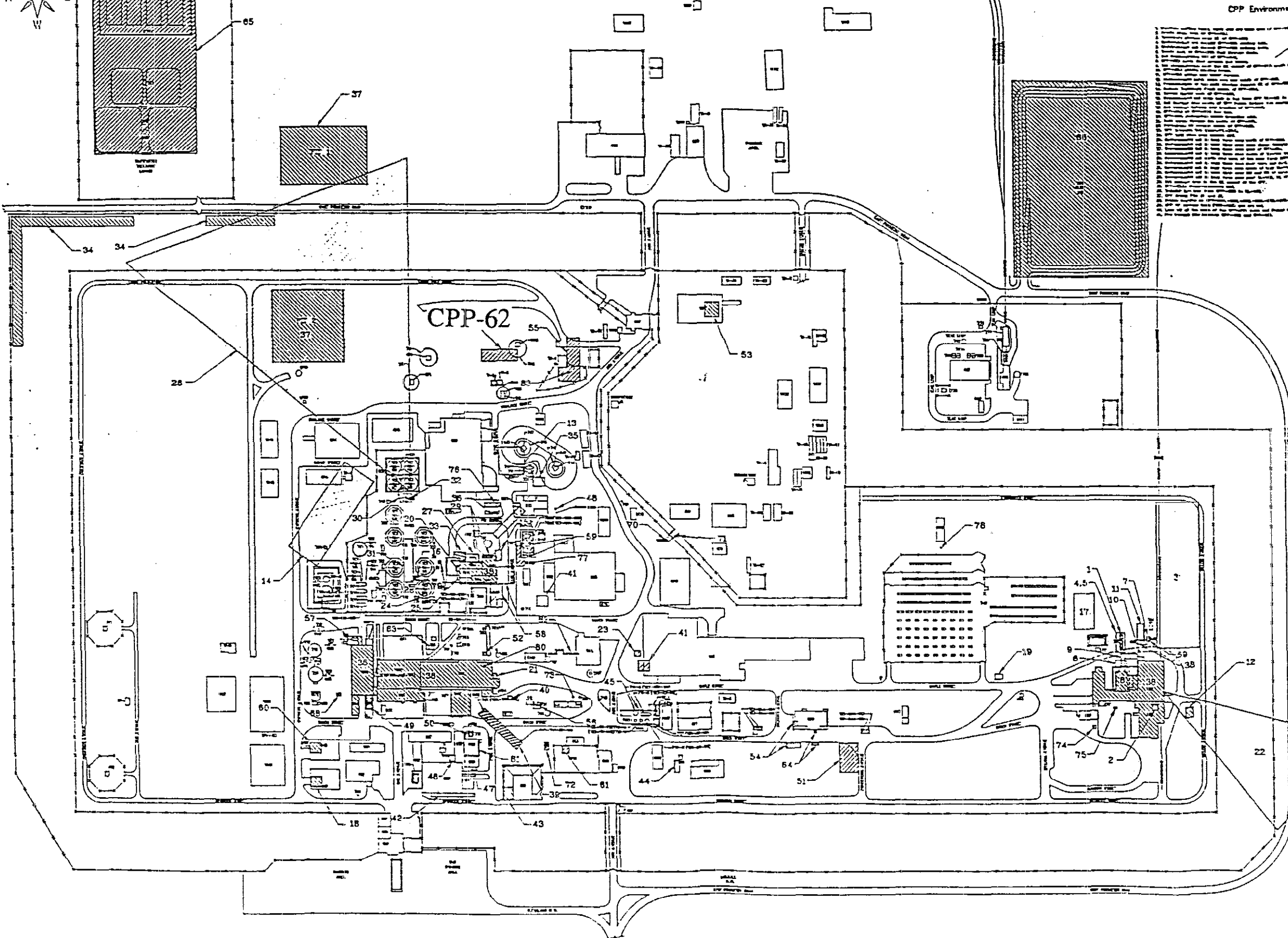


Westinghouse Idaho
Nuclear Company, Inc.

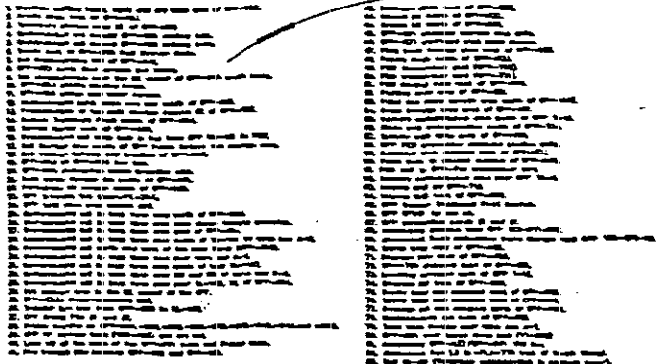
Idaho National Engineering Laboratory

U.S. Department of Energy, Idaho Field Office

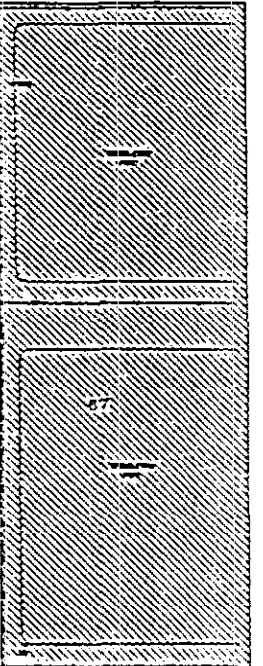
ICPP ENVIRONMENTALLY CONTROLLED AREAS

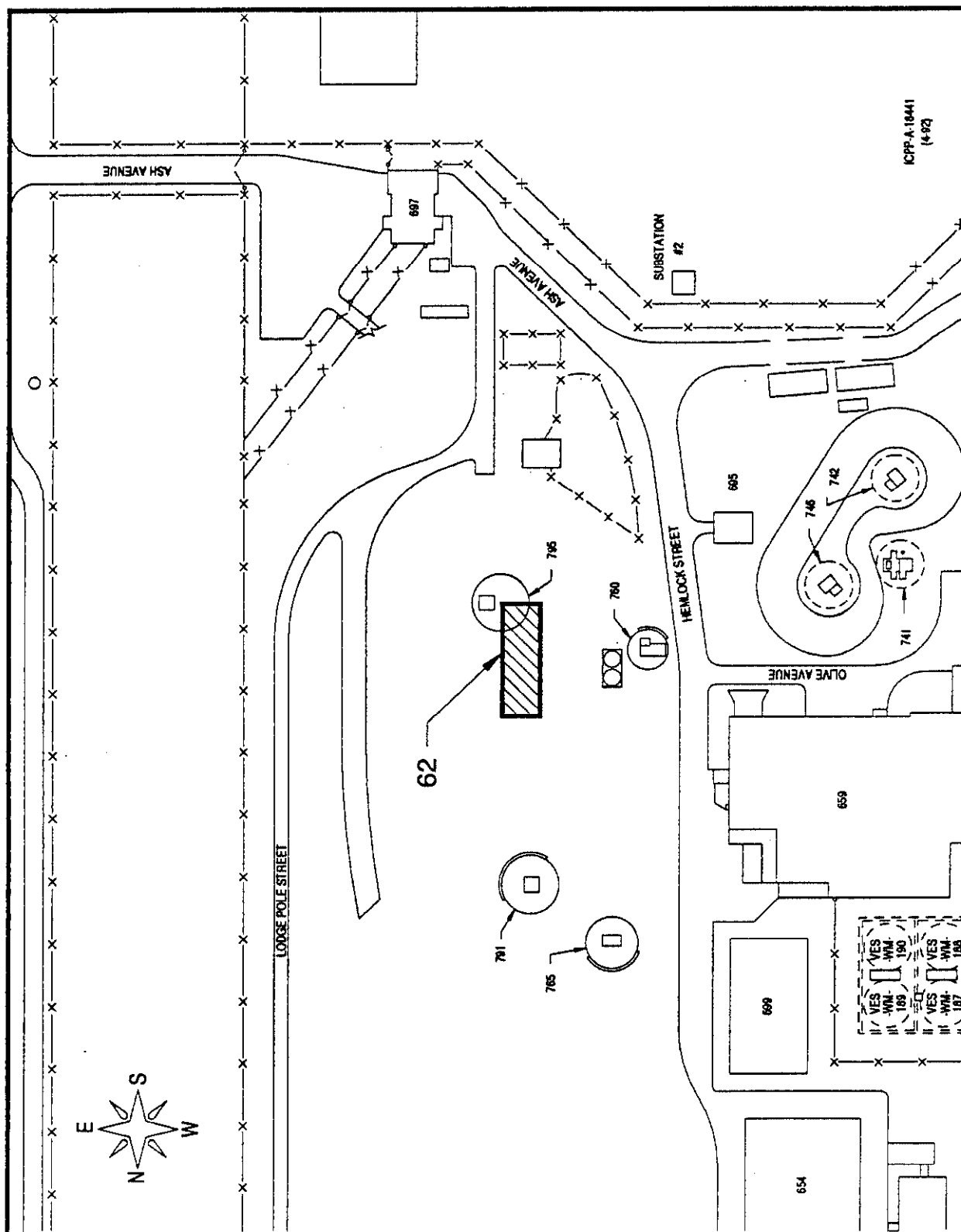


CPP Environmentally Controlled Areas



- Legend
- No Action
 - Track 1
 - Track 2
 - R1/TS





Site CPP-62: Mercury Contaminated Area near CPP TB-4

NO FURTHER ACTION DETERMINATION

The U. S. Department of Energy, U.S. Environmental Protection Agency-Region 10 and the State of Idaho have completed a review of the referenced information for CPP-62 hazardous site, as it pertains to the INEL Federal Facility Agreement of 12-9-91. Based on this review, the Parties have determined that no further action for purposes of investigation or study is justified. This decision is subject to review at the time of issuance of the Record of Decision.

Brief Summary of the basis for no further action:

EPA - no documentation on extent of paint disposal. soil excavated & calciner bin constructed atop source area
DOE - see attached
IDHW - see attached

References:

EPA - 4/30/92 Track I package
DOE - Track I documentation
IDHW - Track I documentation Package

DOE Project Manager Lisa A Green for Jhyle 9/14/92
date

EPA Project Manager Wayne Peers 9/14/92
date

Idaho Project Manager R. Dill for Donna 9/14/92
date

DECISION DOCUMENTATION PACKAGE
COVER SHEET

PREPARED IN ACCORDANCE WITH

TRACK 1 SITES:
GUIDANCE FOR ASSESSING
LOW PROBABILITY HAZARD SITES
AT INEL

SITE DESCRIPTION: MERCURY CONTAMINATED AREA NEAR CPP TB-4

SITE ID: CPP-62 OPERABLE UNIT: 3-02

WASTE AREA GROUP: WAG 3

I. SUMMARY - PHYSICAL DESCRIPTION OF THE SITE:

In 1984, during a baseline study of nonradioactive contaminants, painters/carpenters were observed discarding paint solvents to the soil at T-15. Spent paint solvents are also believed to have been discarded to the soil near ICPP building TB-4. In 1984, analysis of soil samples from the TB-4 area showed mercury concentrations ranging up to 2825 ppb. In 1985, a cleanup of this area was conducted in which 28 drums of contaminated soil were shipped to a commercial hazardous waste facility.

In 1986-87, the 7th set calcined solids storage vault was installed. The installation involved the removal of a large amount of soil from an area which included the estimated contaminated area. Thus, the source of contamination has been removed during the installation of the 7th storage vault.

DECISION RECOMMENDATION

II. SUMMARY - QUALITATIVE ASSESSMENT OF RISK:

The overall reliability of this information is high. The qualitative assessment of risk is low.

Source of contamination was removed during 1985. Any remaining source would have been removed during installation of 7th calcined solids vault.

III. SUMMARY - CONSEQUENCES OF ERROR:

If no action is taken and there are in fact contaminants left in the soil, the risk would be greater than calculated for soil ingestion and/or inhalation pathways.

If remediation actions are taken and the contaminants have in fact already been removed, these would be an unnecessary expenditure of funds.

IV. SUMMARY - OTHER DECISION DRIVERS:

No other Decision Drivers are apparent.

RECOMMENDED ACTION:

No source remains at this site; therefore it is recommended that this site be considered for No Further Action.

SIGNATURES	# PAGES:	DATE:
Prepared By:	DOE WAG Manager:	
Approved By:	Independent Review:	

DECISION STATEMENT
(by DOE RPM)

Date Received: 9/14/92

Disposition: No further action is necessary at CPP-62
based on lack of source term remaining
due to excavations.

DATE: 9/14/92

PAGES (decision statement):

NAME: Lisa A. Green for JLLyle

SIGNATURE: Lisa A. Green for JLL

DECISION STATEMENT

(by State of Idaho RPM)

Date Received: 9/14/92

Disposition: CPP-62 -

Data presented in the package ^{mentions} painters were discovered discarding paint solvents to the soil near ICP bldg TB-4. Soil samples collected show Hg concentrations up to 2825 ppb. in surficial soils removed in 1985 (ie 28 55-gal drums of soil removed). Following this removal, soils were also removed (excavated) to bedrock during construction of 9th bin set.

Based on the above, the source term has been removed and no other disposal practices not identified. Thus, a no further action appears appropriate based on information in this package.

DATE: 9/14/92

PAGES (decision statement): 1

NAME: R. David Howland

SIGNATURE: 

DECISION STATEMENT

(by EPA RPM)

Date Received: 9/14/92

CPP 62

Disposition:

Based on info. provided and existence of new calciner bin and the 14,000 lbs excavated & removed from site and the process operation^{which} was discarding old paint cans. Mercury is contaminant of concern based on analysis of soils. Data concerning disposal operation sketchy, calciner bin over area and no information to support further investigation. Therefore, no further investigation appears warranted

DATE: 9/14/92

PAGES (decision statement):

NAME: Wayne Pierce

SIGNATURE: Wayne Pierce

PROCESS/WASTE WORKSHEET

SITE ID CPP-62

Col 1 Processes Associated with this Site	Col 2 Waste Description & Handling Procedures	Col 3 Description & Location of any Artifacts/Structures/Disposal Areas Associated with this Waste or Process
Process Painting and other activities related to the painter/ carpenter craft shop	Dumping used paint solvents from activities carried on in Craft Shop. Contaminants of concern are organics and mercury.	Artifact Temporary Building TB-4 Location Adjacent to TB-4 on coordinates N695,351; E297,628 Description Building has been removed
		Artifact Location Description
		Artifact Location Description
Process		Artifact Location Description
		Artifact Location Description
		Artifact Location Description
Process		Artifact Location Description
		Artifact Location Description
		Artifact Location Description

CONTAMINANT WORKSHEET

page 7

SITE ID CPP-62

PROCESS (Col 1) Discarded solvent from painting operation

WASTE (Col 2) ORGANICS & MERCURY

Col 4 What known/potential hazardous substances/constituents are associated with this waste or process?	Col 5 Potential sources associated with this hazardous material	Col 6 Known/estimated concentration of hazardous substances/constituents*	Col 7 Risk based concentration mg/kg	Col 8 Qualitative risk assessment (Hi/Med/Lo)	Col 9 Overall reliability (Hi/Med/Lo)
Organics	Solvents from Paint Shop	Unknown	ND	Low	Hi
Mercury	Paint Ingredient	2.825 mg/kg	81 mg/kg	Low	Hi

a. ND = not detected

PROCESS CPP-62

Question 1. What are the waste generation process locations and dates of operation associated with this site?

Block 1 Answer:

Activities associated with the painter/carpenter craft shop primarily believed to be organic solvents involved with painting.

Block 2 How reliable is/are the information source/s? X High Med Low (check one)
EXPLAIN THE REASONING BEHIND THIS EVALUATION.

Historical data and aerial photos indicate the location of the craft shop. Interviews with personnel have confirmed activities at this site.

Block 3 Has this INFORMATION been confirmed? X Yes No (check one)
IF SO, DESCRIBE THE CONFIRMATION.

Facility maps have been checked for location of craft shop.

Block 4 SOURCES OF INFORMATION (check appropriate box/es & source number from reference list)

No available information	[]	_____	Analytical data	[]	_____
Anecdotal	[]	_____	Documentation about data	[]	_____
Historical process data	[]	_____	Disposal data	[]	_____
Current process data	[]	_____	Q.A. data	[]	_____
Aerial photographs	[X]	4	Safety analysis report	[]	_____
Engineering/site drawings	[X]	2	DaD report	[]	_____
Unusual Occurrence Report	[]	_____	Initial assessment	[]	_____
Summary documents	[]	_____	Well data	[]	_____
Facility SOPs	[]	_____	Construction data	[]	_____
OTHER	[]	_____			

PROCESS CPP-62

Question 2. What are the disposal process locations and dates of operation associated with this site?

Block 1 Answer:

The disposal location were adjacent to temporary building TB-4. Dates of disposal are prior to 1984. TB-4 and contaminated soils were removed prior to construction of the 7th calcine bin set (CPP-695).

Block 2 How reliable is/are the information source/s? ☒ High ☐ Med ☐ Low (check one)

EXPLAIN THE REASONING BEHIND THIS EVALUATION.

A 1984 baseline study of controlled pollutants in the vicinity of the ICPP indicated concentrations of mercury at approximately ten times normal levels, (normal levels at that time were considered to be 200 ppb) indicating a release of mercury at some time in the past.

Block 3 Has this INFORMATION been confirmed? ☒ Yes ☐ No (check one)

IF SO, DESCRIBE THE CONFIRMATION.

Additional soil samples were taken and the highest level indicated were 2825 ppb.

Block 4 **SOURCES OF INFORMATION** (check appropriate box/es & source number from reference list)

No available information	<input type="checkbox"/>	Analytical data	<input checked="" type="checkbox"/> Ref. 3
Anecdotal	<input type="checkbox"/>	Documentation about data	<input type="checkbox"/>
Historical process data	<input type="checkbox"/>	Disposal data	<input type="checkbox"/>
Current process data	<input type="checkbox"/>	Q.A. data	<input type="checkbox"/>
Aerial photographs	<input type="checkbox"/>	Safety analysis report	<input type="checkbox"/>
Engineering/site drawings	<input type="checkbox"/>	D&D report	<input type="checkbox"/>
Unusual Occurrence Report	<input type="checkbox"/>	Initial assessment	<input type="checkbox"/>
Summary documents	<input checked="" type="checkbox"/> Ref 5.	Well data	<input type="checkbox"/>
Facility SOPs	<input type="checkbox"/>	Construction data	<input type="checkbox"/>
OTHER	<input type="checkbox"/>		

PROCESS CPP-62

Question 3. Is there empirical, circumstantial, or other evidence of migration?
If so, what is it?

Block 1 Answer:

There is no evidence of contaminant migration.

Block 2 How reliable is/are the information source/s? X High Med Low (check one)

EXPLAIN THE REASONING BEHIND THIS EVALUATION.

Source has been excavated and contaminated soils removed.

Block 3 Has this INFORMATION been confirmed? X Yes No (check one)

IF SO, DESCRIBE THE CONFIRMATION.

Project Drawings and Areal Photographs.

Block 4 **SOURCES OF INFORMATION** (check appropriate box/es & source number from reference list)

No available information	[]	_____	Analytical data	[]	_____
Anecdotal	[]	_____	Documentation about data	[]	_____
Historical process data	[]	_____	Disposal data	[]	_____
Current process data	[]	_____	Q.A. data	[]	_____
Aerial photographs	[X]	Ref. 4	Safety analysis report	[]	_____
Engineering/site drawings	[X]	Ref. 3	D&O report	[]	_____
Unusual Occurrence Report	[]	_____	Initial assessment	[]	_____
Summary documents	[]	_____	Well data	[]	_____
Facility SOPs	[]	_____	Construction data	[]	_____
OTHER	[]	_____			

PROCESS CPP-62

Question 4. Is there evidence that a source exists at this site? If so, list the sources and describe the evidence.

Block 1 Answer:

No source remains at this site. Contaminated soils were identified by sampling, put in barrels and shipped off the ICPP. Any remaining contamination would have been removed and combined with the soils excavated during the construction of bin set #7 (CPP-795). Some of this soil was used as backfill. The remaining concentrations would have been extremely small (ppb range) and once combined with the soils from the excavation would result in concentrations well below the calculated risk based concentrations of 81 mg/kg, see contaminant worksheet.

Block 2 How reliable is/are the information source/s? X High Med Low (check one)

EXPLAIN THE REASONING BEHIND THIS EVALUATION.

Project drawings and areal photos indicate extent of excavation.

Block 3 Has this INFORMATION been confirmed? X Yes No (check one)

IF SO, DESCRIBE THE CONFIRMATION.

See Ref. 3 & 4.

Block 4 **SOURCES OF INFORMATION** (check appropriate box/es & source number from reference list)

No available information	[]	_____	Analytical data	[]	_____
Anecdotal	[]	_____	Documentation about data	[]	_____
Historical process data	[]	_____	Disposal data	[]	_____
Current process data	[]	_____	Q.A. data	[]	_____
Areal photographs	[X]	Ref. 4	Safety analysis report	[]	_____
Engineering/site drawings	[X]	Ref. 3	D&D report	[]	_____
Unusual Occurrence Report	[]	_____	Initial assessment	[]	_____
Summary documents	[]	_____	Well data	[]	_____
Facility SOPs	[]	_____	Construction data	[]	_____
OTHER	[X]	Ref. 6			

PROCESS CPP-62

Question 5. Does site operating or disposal historical information allow estimation of the pattern of potential contamination? If the pattern is expected to be a scattering of hot spots, what is the expected minimum size of a significant hot spot?

Block 1 Answer:

No source remains at this site.

Block 2 How reliable is/are the information source/s? High Med Low (check one)
EXPLAIN THE REASONING BEHIND THIS EVALUATION.

Block 3 Has this INFORMATION been confirmed? Yes No (check one)
IF SO, DESCRIBE THE CONFIRMATION.

Block 4 **SOURCES OF INFORMATION** (check appropriate box/es & source number from reference list)

No available information ☐ _____
 Anecdotal ☐ _____
 Historical process data ☐ _____
 Current process data ☐ _____
 Aerial photographs ☐ _____
 Engineering/site drawings ☐ _____
 Unusual Occurrence Report ☐ _____
 Summary documents ☐ _____
 Facility SOPs ☐ _____
 OTHER ☐ _____

Analytical data ☐ _____
 Documentation about data ☐ _____
 Disposal data ☐ _____
 Q.A. data ☐ _____
 Safety analysis report ☐ _____
 D&D report ☐ _____
 Initial assessment ☐ _____
 Well data ☐ _____
 Construction data ☐ _____

PROCESS CPP-62

Question 6. Estimate the length, width, and depth of the contaminated region. What is the known or estimated volume of the source? If this is an estimated volume, explain carefully how the estimate was derived.

Block 1 Answer:

No source remains at this site.

Block 2 How reliable is/are the information source/s? ☐ High ☐ Med ☐ Low (check one)

EXPLAIN THE REASONING BEHIND THIS EVALUATION.

Block 3 Has this INFORMATION been confirmed? ☐ Yes ☐ No (check one)

IF SO, DESCRIBE THE CONFIRMATION.

Block 4 **SOURCES OF INFORMATION** (check appropriate box/es & source number from reference list)

No available information	<input type="checkbox"/>	Analytical data	<input type="checkbox"/>
Anecdotal	<input type="checkbox"/>	Documentation about data	<input type="checkbox"/>
Historical process data	<input type="checkbox"/>	Disposal data	<input type="checkbox"/>
Current process data	<input type="checkbox"/>	Q.A. data	<input type="checkbox"/>
Areal photographs	<input type="checkbox"/>	Safety analysis report	<input type="checkbox"/>
Engineering/site drawings	<input type="checkbox"/>	D&D report	<input type="checkbox"/>
Unusual Occurrence Report	<input type="checkbox"/>	Initial assessment	<input type="checkbox"/>
Summary documents	<input type="checkbox"/>	Well data	<input type="checkbox"/>
Facility SOPs	<input type="checkbox"/>	Construction data	<input type="checkbox"/>
OTHER	<input type="checkbox"/>		

PROCESS CPP-62

Question 7. What is the known or estimated quantity of hazardous substance/constituent at this source? If the quantity is an estimate, explain carefully how the estimate was derived.

Block 1 Answer:

No source remains.

Block 2 How reliable is/are the information source/s? High Med Low (check one)
EXPLAIN THE REASONING BEHIND THIS EVALUATION.

Block 3 Has this INFORMATION been confirmed? Yes No (check one)
IF SO, DESCRIBE THE CONFIRMATION.

Block 4 **SOURCES OF INFORMATION** (check appropriate box/es & source number from reference list)

No available information ☐ _____
 Anecdotal ☐ _____
 Historical process data ☐ _____
 Current process data ☐ _____
 Aerial photographs ☐ _____
 Engineering/site drawings ☐ _____
 Unusual Occurrence Report ☐ _____
 Summary documents ☐ _____
 Facility SOPs ☐ _____
 OTHER ☐ _____

Analytical data ☐ _____
 Documentation about data ☐ _____
 Disposal data ☐ _____
 Q.A. data ☐ _____
 Safety analysis report ☐ _____
 D&D report ☐ _____
 Initial assessment ☐ _____
 Well data ☐ _____
 Construction data ☐ _____

PROCESS CPP-62

Question 8. Is there evidence that this hazardous substance/constituent is present at the source as it exists today? If so, describe the evidence.

Block 1 Answer:

No source remains.

Block 2 How reliable is/are the information source/s? High Med Low (check one)
EXPLAIN THE REASONING BEHIND THIS EVALUATION.

Block 3 Has this INFORMATION been confirmed? Yes No (check one).
IF SO, DESCRIBE THE CONFIRMATION.

Block 4 **SOURCES OF INFORMATION** (check appropriate box/es & source number from reference list)

No available information	<input type="checkbox"/>	_____	Analytical data	<input type="checkbox"/>	_____
Anecdotal	<input type="checkbox"/>	_____	Documentation about data	<input type="checkbox"/>	_____
Historical process data	<input type="checkbox"/>	_____	Disposal data	<input type="checkbox"/>	_____
Current process data	<input type="checkbox"/>	_____	Q.A. data	<input type="checkbox"/>	_____
Aerial photographs	<input type="checkbox"/>	_____	Safety analysis report	<input type="checkbox"/>	_____
Engineering/site drawings	<input type="checkbox"/>	_____	D&D report	<input type="checkbox"/>	_____
Unusual Occurrence Report	<input type="checkbox"/>	_____	Initial assessment	<input type="checkbox"/>	_____
Summary documents	<input type="checkbox"/>	_____	Well data	<input type="checkbox"/>	_____
Facility SOPs	<input type="checkbox"/>	_____	Construction data	<input type="checkbox"/>	_____
OTHER	<input type="checkbox"/>	_____			

REFERENCES

TRACK 1 DECISION DOCUMENT REFERENCES SITE CPP-62, MERCURY CONTAMINATED AREA NEAR CPP TB-4 IDAHO CHEMICAL PROCESSING PLANT

1. Letter to D. J. Poland; From B.G. Motes (Moe-30-85).
Subject, Mercury Soil Sample Analysis. September 4,
1985.
2. Construction drawings for 7th Set Calcined Solids
Storage Facility, 1985-1986.
3. Letter to P. I. Nelson; From D. J. Poland (DJP-2-85).
Subject: Mercury in Soil Cleanup Near TB-4.
4. Aerial Photo of ICPP showing Bin Set #7 excavation.
5. Uniform Hazardous Waste Manifest; 02/11/86.
6. Track-1 Risk Evaluation Summary; 1/24/92.

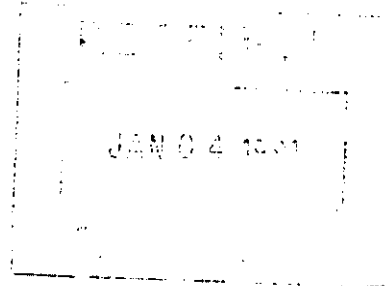
Reference 1



Westinghouse Idaho
Nuclear Company, Inc.

001344

From : Moe-30-85
Phone : B. G. Motes
6-3577
Date : September 4, 1985
Subject: Mercury Soil Sample Analysis



To : D. J. Poland, Engineer
Environmental Engineering

cc: M. D. Anderson K. R. Krivanek
S. K. Bird B. R. Wheeler
S. J. Fernandez *107* C. M. Wilcox
C. W. Filby B. G. Motes-2

In a 1984 baseline study of nonradioactive controlled pollutants (WINCO-1018), concentrations of mercury at approximately ten times normal levels were observed in the soil near a carpenter/painter workshop. As the area is in the vicinity of the future Calciner Bin Set VII, a series of additional surface soil samples were collected for mercury analyses at your request to evaluate the extent of the contamination and to aid in future excavation of the area. In total, 64 samples were collected. Of the total, 30 were submitted for analyses and 34 were retained for future analyses, as needed.

Attached, Table I, are the results for the 30 samples submitted for analyses. Of note, five of the samples are identified with two sample codes - one is the sample grid code and the other (denoted by parenthesis) is the sample code you assigned to the samples. To aid in comparison to the earlier data, the results are reported in parts per billion (ppb). Also attached is a copy of the sample grid used to collect the samples. It details the locations of the 64 samples collected, the 30 samples submitted for analyses, and the 34 samples retained for future analyses.

As discussed with you earlier, all but two of the samples are below the EPA standard of approximately 200 ppb. The two samples above contained approximately 500 and 1500 ppb mercury and were located at grid coordinates 8N-16E and 28N-4.5E, respectively. As the samples surrounding the sample at grid coordinate 28N-4.5E were well below the 200 ppb standard, no additional analyses of samples are planned near grid coordinate 28N-4.5E. As samples immediately adjacent to coordinate 8N-16E were not analyzed, however, additional samples analyses are planned near grid coordinate 8N-16E. The samples planned for analysis include grid coordinates: 6N-16E, 7N-14E, 7N-18E, 9N-14E, 9N-18E, 10N-16E, 11N-14E, 11N-18E, 13N-18E, 14N-16E, and 15N-18E. Upon completion of the analyses, the results will be forwarded to you.

D. J. Poland
Attachment
Moe-30-85
September 4, 1985

00144

Table I

Mercury Soil Sample Analysis Results

Sample Code	Mercury Concentration (ppb)
7N 12E	50.9
8N 16E	512.7
8N 20E	25.7
11N 12E	36.3
12N 16E	40.4
13N 10E	19.3
14N 6E	25.0
15N 8E	36.2
15N 12E	28.3
16N 16E	87.1
18N 6E	23.0
18N 16E	79.2
20N 16E	36.9
22N 6E	25.3
23N 18E	69.9
26N 4E	42.8
26N 6E	28.1
28N 4.5E	1516
30N 4E	31.6

D. J. Poland
Attachment
Moe-30-85
September 4, 1985

001314

Table I (Continued)
Mercury Soil Sample Analysis Results

<u>Sample Code</u>	<u>Mercury Concentration (ppb)</u>
34N 4E	34.3
38N 4E	18.9
41N 4E	28.0
41N 8E	48.5
41N 12E	19.8
41N 16E	30.8
42N 6E (10N 5E)	27.2
42N 10E (10N 25E)	55.8
42N 14E (11N 25E)	51.7
43N 7E (15N 8E)	33.4
43N 9E (15N 17.5E)	133.4

J. Polz

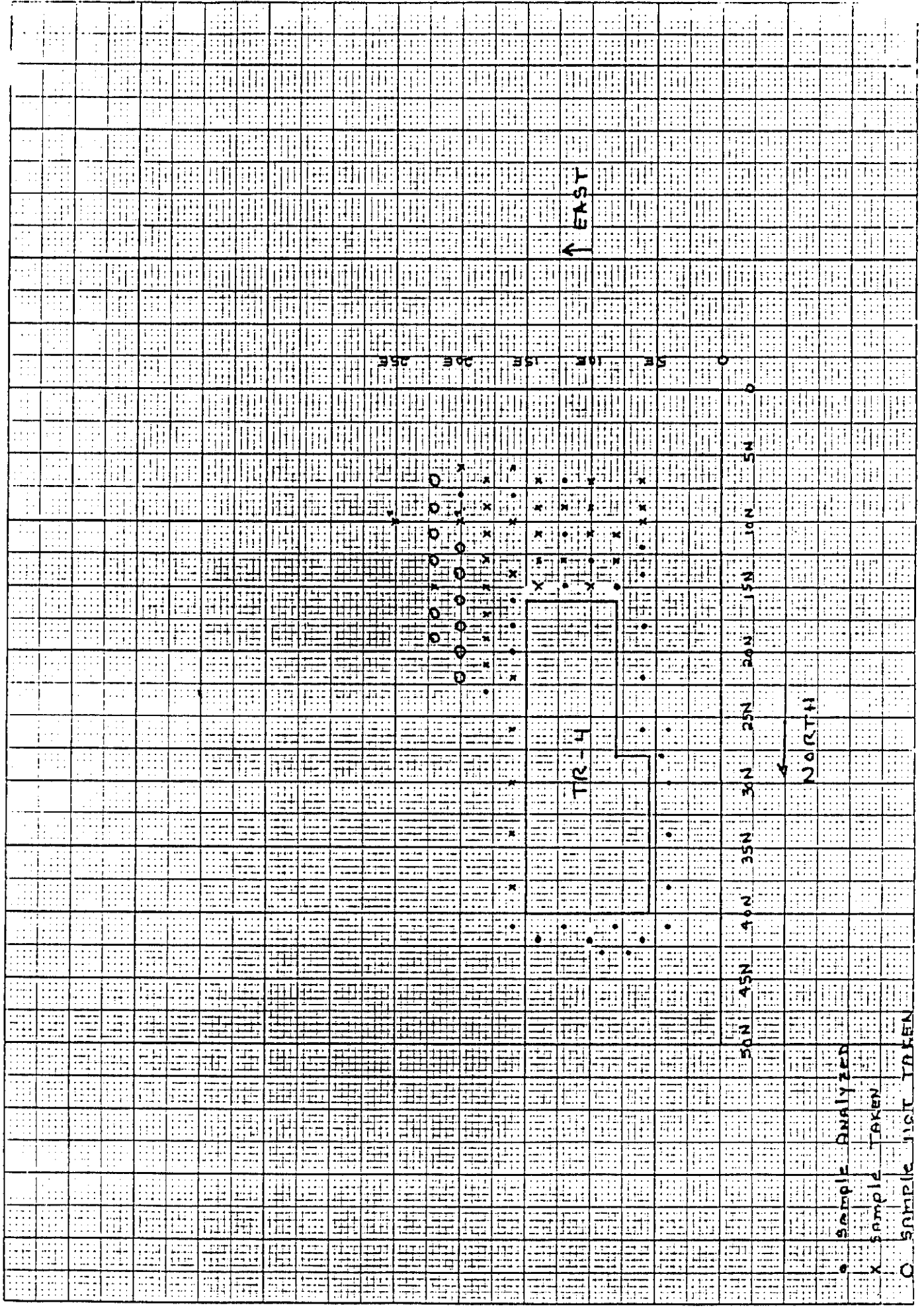
Attachment

08-30-85

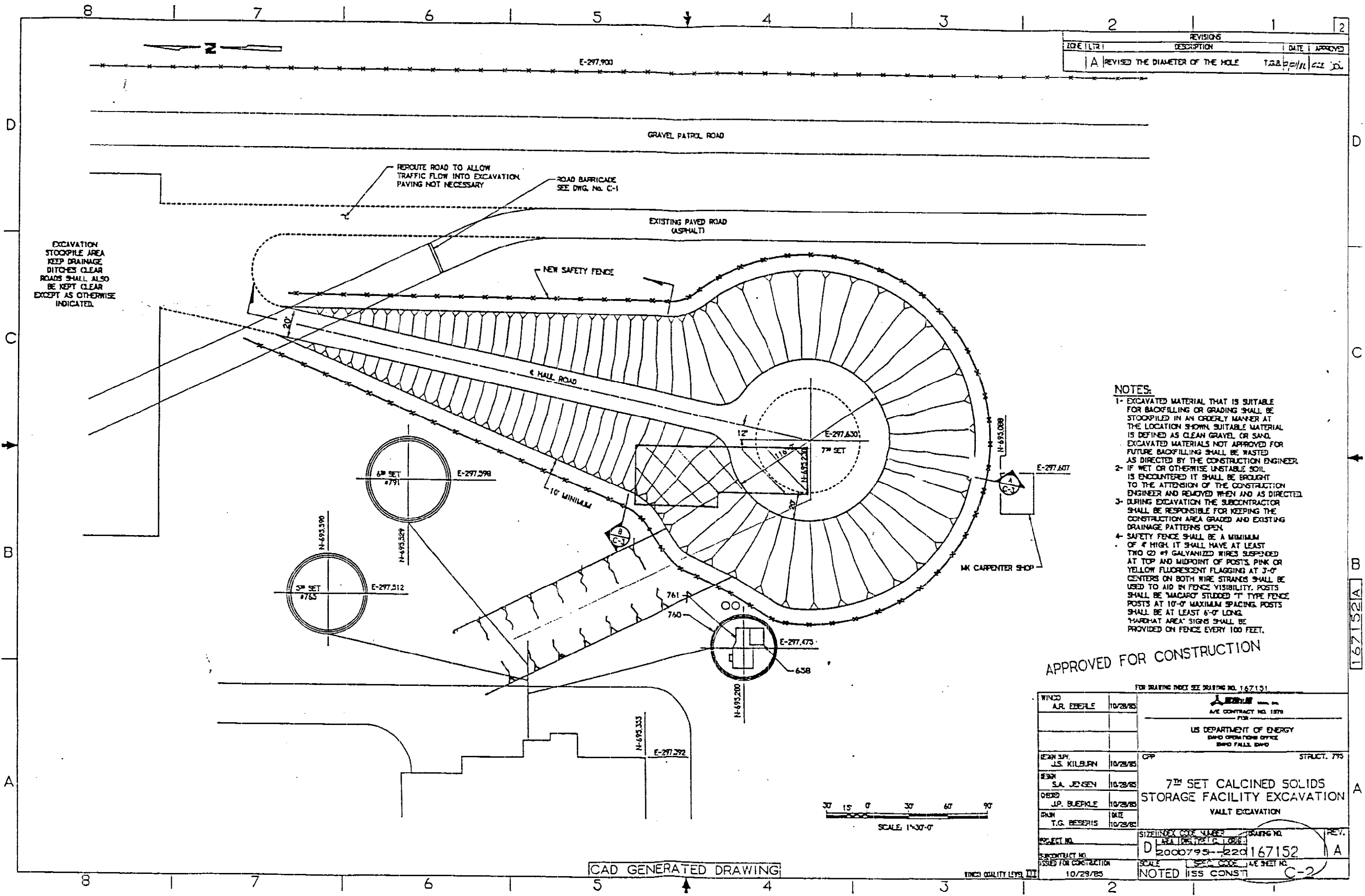
September 4, 1-

16-2 20 N 20 TO THE PRINCE OF WALES

46 1242



Reference 2



REVISIONS			
NO.	DESCRIPTION	DATE	APPROVED
1	REVISED THE DIAMETER OF THE HOLE	10/28/85	T.G. BERRY

- NOTES:
- EXCAVATED MATERIAL THAT IS SUITABLE FOR BACKFILLING OR GRADING SHALL BE STOCKPILED IN AN ORDERLY MANNER AT THE LOCATION SHOWN. SUITABLE MATERIAL IS DEFINED AS CLEAN GRAVEL OR SAND. EXCAVATED MATERIALS NOT APPROVED FOR FUTURE BACKFILLING SHALL BE WASTED AS DIRECTED BY THE CONSTRUCTION ENGINEER.
 - IF WET OR OTHERWISE UNSTABLE SOIL IS ENCOUNTERED IT SHALL BE BROUGHT TO THE ATTENTION OF THE CONSTRUCTION ENGINEER AND REMOVED WHEN AND AS DIRECTED.
 - DURING EXCAVATION THE SUBCONTRACTOR SHALL BE RESPONSIBLE FOR KEEPING THE CONSTRUCTION AREA GRADED AND EXISTING DRAINAGE PATTERNS OPEN.
 - SAFETY FENCE SHALL BE A MINIMUM OF 4' HIGH. IT SHALL HAVE AT LEAST TWO (2) #9 GALVANIZED WIRES SUSPENDED AT TOP AND MIDPOINT OF POSTS. PINK OR YELLOW FLUORESCENT FLAGGING AT 3'-0" CENTERS ON BOTH WIRE STRANDS SHALL BE USED TO AID IN FENCE VISIBILITY. POSTS SHALL BE "MACADAM" STUDDED "T" TYPE FENCE POSTS AT 10'-0" MAXIMUM SPACING. POSTS SHALL BE AT LEAST 6'-0" LONG. "HARDHAT AREA" SIGNS SHALL BE PROVIDED ON FENCE EVERY 100 FEET.

APPROVED FOR CONSTRUCTION

WINCO A.R. EBERLE 10/28/85		FOR DRAWING INDEX SEE DRAWING NO. 167151	
		AVE CONTRACT NO. 1570 7138	
		US DEPARTMENT OF ENERGY DAWD OPERATIONS OFFICE DAWD FALLS, DAWD	
DESIGN BY J.S. KILBURN 10/28/85	CHKD BY S.A. JENSEN 10/28/85	DATE 10/28/85	PROJECT NO. 2000795-220167152
DATE 10/28/85	BY T.G. BERRY	SCALE NOTED ISS CONST	REV. A

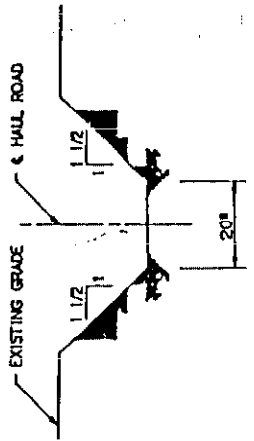
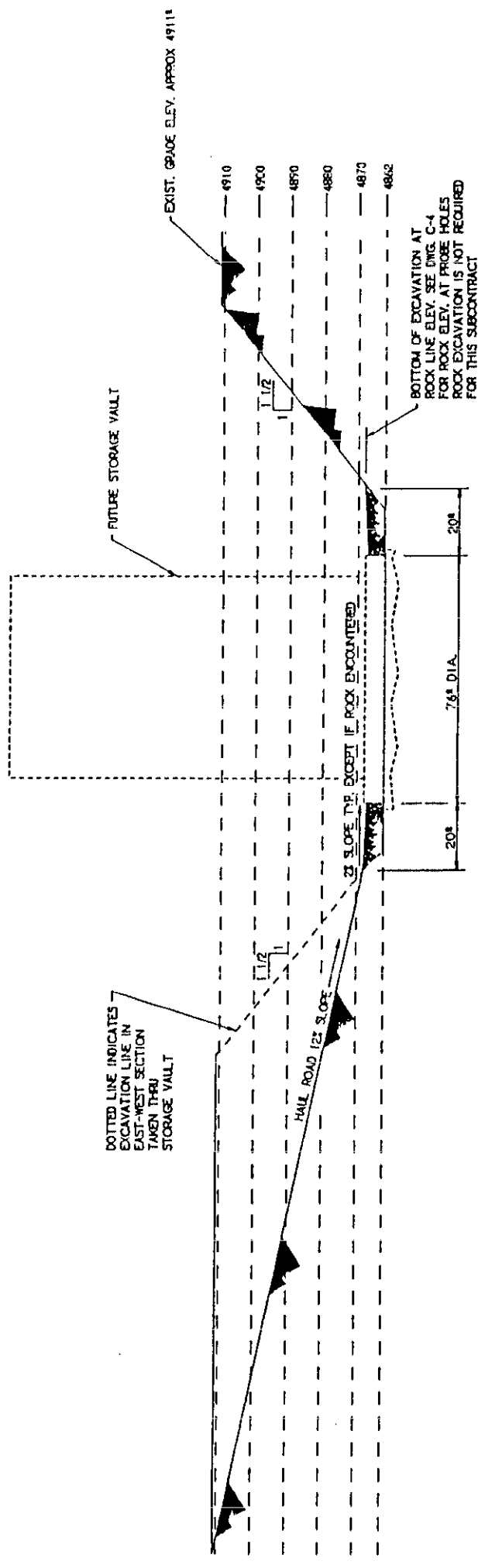
CAD GENERATED DRAWING

WINCO QUALITY LEADS

167152A

RECEIVED
JAN 04 1991
ERC FILE COPY

DATE	REVISION	DESCRIPTION	DATE	APPROVED
1/21/91	A	REVISED SLOPE FROM 1 1/4:1 TO 1 1/2:1 T.G.B./A.E.	1/21/91	



SECTION A
N.T.S. C-2

SECTION B
N.T.S. C-2

- NOTES:
- 1- EXCAVATION SLOPES SHALL BE BETWEEN 1 1/2:1 AND 2:1.
 - 2- IN NO CASE SHALL SLOPES BE SUCH THAT EXISTING STRUCTURES ARE UNDERMINED OR UNCOVERED. THE CONSTRUCTION ENGINEER'S REPRESENTATIVES SHALL INSPECT SLOPES TO ENSURE THAT ABOVE CONDITIONS ARE MET.
 - 3- SLOPE SHALL BE MEASURED EVERY 3-0' LINEARLY ON THE SLOPE.

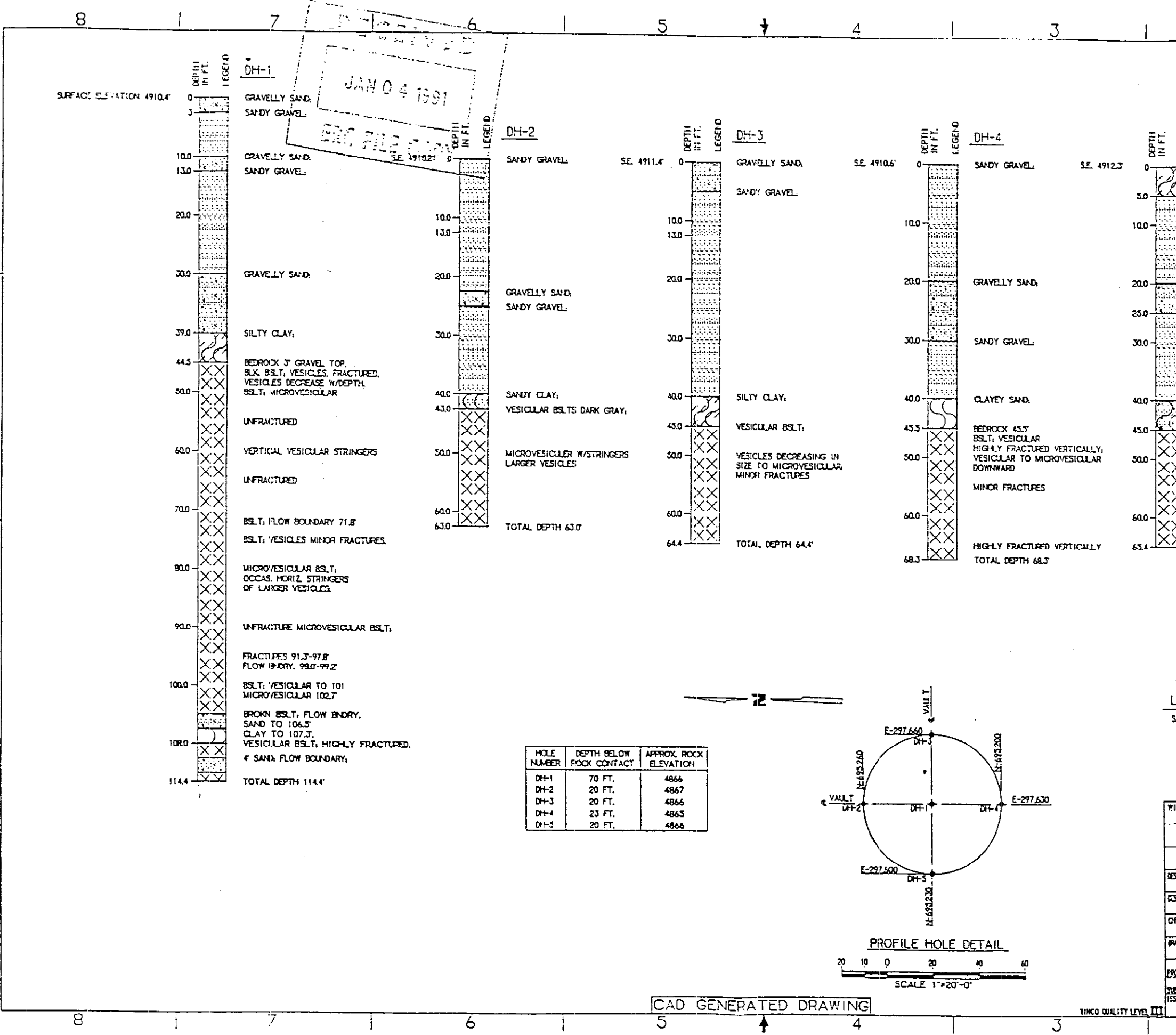
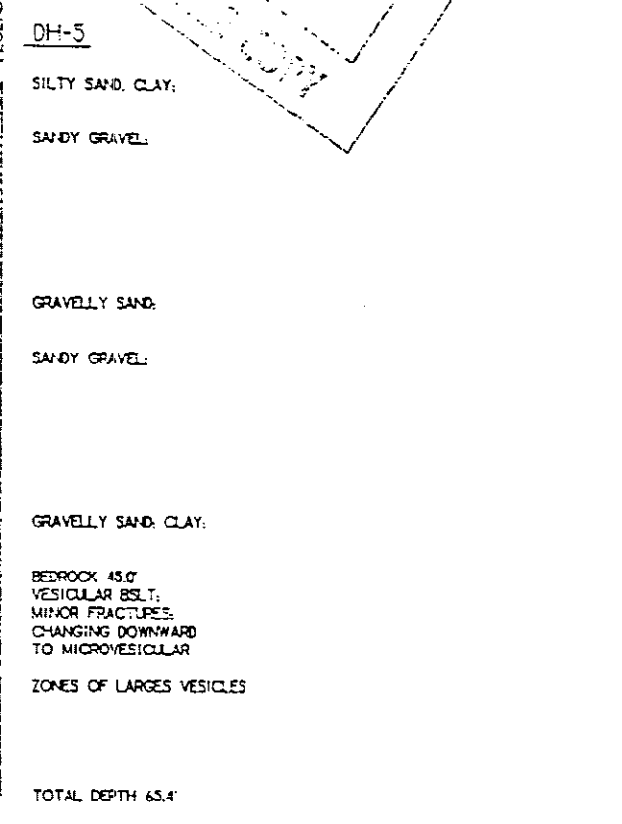
APPROVED FOR CONSTRUCTION

FOR DRILLING INDEX SEE DRAWING NO. 167151	
DATE 10/28/88	BY A.J. EBERLE
US DEPARTMENT OF ENERGY GEOLOGICAL SURVEY DENO FILL SITE	
DATE 10/28/88	BY J.S. KILBURN
DATE 10/28/88	BY S.A. JENSEN
DATE 10/28/88	BY J.P. BLECKLE
DATE 10/28/88	BY T.G. BESENIUS
PROJECT NO. 2000795-220	
DRAWING NO. 167153	
REVISION A	
SCALE 1" = 20'	
NOTED 10/28/88	
ISSUED 10/28/88	
CONST. C-3	

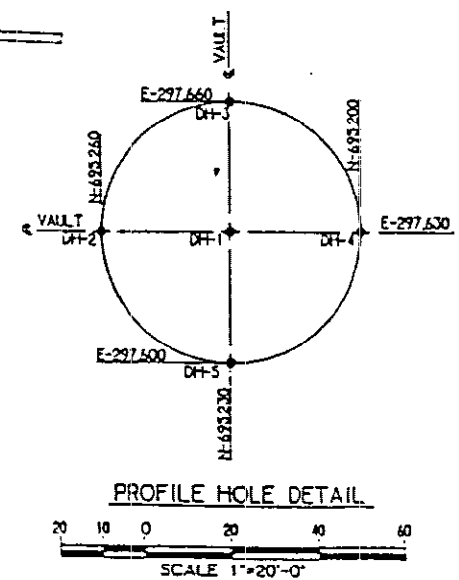
CAD GENERATED DRAWING

001319

REVISIONS		DATE	APPROVED
ZONE	DESCRIPTION		



HOLE NUMBER	DEPTH BELOW ROCK CONTACT	APPROX. ROCK ELEVATION
DH-1	70 FT.	4866
DH-2	20 FT.	4867
DH-3	20 FT.	4866
DH-4	23 FT.	4865
DH-5	20 FT.	4866



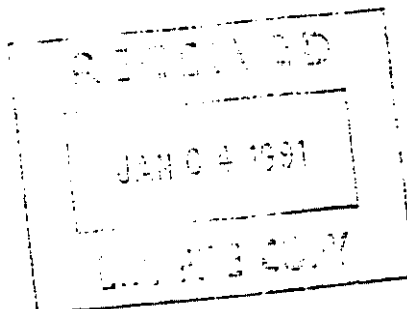
CAD GENERATED DRAWING

Reference 3



Westinghouse Idaho
Nuclear Company, Inc.

DJP-2-85



001030

From : D. J. Poland
Phone : 6-3650
Date : October 24, 1985
Subject: Mercury In Soil Cleanup Near TB-4

To : P. I. Nelson, Manager
Calcination and Analytical Facility Projects

cc: R. J. Beers, DOE-ID W. C. Mallory
H. D. Christiansen R. J. Marcinko
C. E. Clark, DOE-ID G. V. Markham
A. R. Eberle T. F. Pointer
F. E. Hicks, M-K J. B. Whitsett, DOE-ID
K. R. Krivanek D. L. York, M-K 6-2769

The attached guidelines, prepared to help direct the cleanup of the mercury-contaminated soil near the ICPP building TB-4, have been approved.

D. J. Poland, Engineer
Environmental Engineering

/clb

Attachment

62

GUIDELINES FOR THE CLEANUP OF THE MERCURY-CONTAMINATED SOIL NEAR TB-4

01
00

As part of a 1984 baseline study of controlled pollutants in the vicinity of the Idaho Chemical Processing Plant (ICPP) processes (WINCO-1018), concentrations of mercury at approximately ten times normal levels were detected in the soil near a carpenter/painter building (TB-4). The TB-4 area will be the location for the 7th Calciner Bin Set, so additional samples were collected to evaluate the extent of the contamination and to aid in the excavation of this contamination.

These guidelines represent the procedures for the cleanup of the mercury-contaminated soil near TB-4 (Figure 1). Emphasis will be placed on the excavation, packaging, and disposal/shipping of the soil because sampling and analysis has already been conducted.

Cleanup of the site contaminated with mercury will consist of the following: (I) preparing guidelines for the cleanup; (II) cleaning up the contaminated site; and (III) disposal/shipping of the contaminated soil.

The site has been secured and the boundaries of contamination have been determined (Figure 2). Therefore, these guidelines have been prepared to direct the cleanup. The cleanup activities will include:

- o Health and safety precautions;
- o Physical removal of the contaminated soil;
- o Decontamination of equipment; and
- o Disposal/shipping of the contaminated soil.

I. CLEANUP GUIDELINES

A. Health and Safety

Industrial Safety has determined that the concentrations of mercury found in the area of TB-4 does not pose a health and safety hazard. However, as part of the normal WINCO procedure, the subcontractor will be required to obtain a Construction Safe Work Permit (CSWP) for each shift. Protective clothing will not be necessary; however, during placement of the soil into the drum, construction personnel (in close proximity of the drum) must wear a dust mask approved for use by WINCO Industrial Hygiene. Also, to reduce injuries, hard hats will be worn, and safe work practices will be followed.

II. CLEANING UP THE CONTAMINATED AREAS

Members of the Nuclear and Industrial Safety (N&IS) and Technical Departments have determined the areas of contamination by sampling the soil. The analysis indicated three (3) main areas (Figure 1) that exceeded the Environmental Protection Agency's (EPA) Extraction Procedure (EP) Toxicity Limit of 200 ppb (Table 1 and Table 2). These areas are currently roped off and posted.

A. Removal of Contaminated Soil

The mercury-contaminated soil will be excavated using a horizontal skimming technique, rather than a vertical digging technique. Soil will be removed to a depth of 12 inches as analysis indicated contamination below 6 inches (Table 2) but not to 12 inches (Table 2). The extent of the contamination is shown in Figure 2.

The following procedure for removing the contaminated soil will be followed after obtaining the Construction Safe Work Permit through Industrial Safety. Additional soil sampling will not be necessary.

1. Operational Health Physics (OHP) will re-survey the mercury-contaminated areas before excavation activities.
2. The top 9 inches of soil in the contaminated areas will be removed using a backhoe. (Excavation for a trench proceeded before the mercury contamination was removed. During this trenching activity, soil was excavated and placed on top of the mercury-contaminated soil. Some of this soil will be disposed of with the mercury-contaminated soil.)
3. All soil removed will be placed in 55-gallon drums. Visqueen will be placed under and around the drums to collect soil that falls out of the backhoe (Visqueen and soil will be disposed of as mercury-contaminated).
4. All equipment used in this portion of cleanup activities will be decontaminated to prevent cross-contamination.
5. The soil below 9 inches will be removed to a depth of 12 inches. This will also be placed in the 55-gallon drums and Visqueen will also be placed around these drums to collect loose soil (Visqueen and soil will be disposed of as mercury-contaminated).
6. All equipment used in this portion of the cleanup activities will be decontaminated as a precautionary measure.

B. Decontaminating Equipment

All equipment exposed to the mercury-contamination, including the backhoe bucket, will be decontaminated by wiping with clean rags. Plastic sheeting will be placed under any equipment being decontaminated to prevent the spread of contamination. Such sheeting and rags will be disposed of as mercury-contaminated waste.

C. Restoration of Site

Site restoration will not be necessary because this area is the construction site for the 7th Calciner Bin Set.

III. DISPOSAL/SHIPPING OF THE CONTAMINATED SOIL

The mercury-contaminated soil and decontamination materials (rags, plastic, etc.) will be packaged in 55-gallon Department of Transportation (DOT) 17-C poly liner approved drums and shipped through EG&G to a commercial disposal facility. Shipping will be handled and coordinated by WINCO Traffic and Waste Management. Procedures to be followed are contained in the WINCO Transportation of Hazardous Materials Manual. WINCO will label the drums. The subcontractor will stencil the drums with a stencil provided by WINCO. Prior to shipping, the subcontractor will relocate the filled drums to the WINCO staging area located southwest of CPP-660.

Figure 1 - Location of the mercury-contaminated soil.

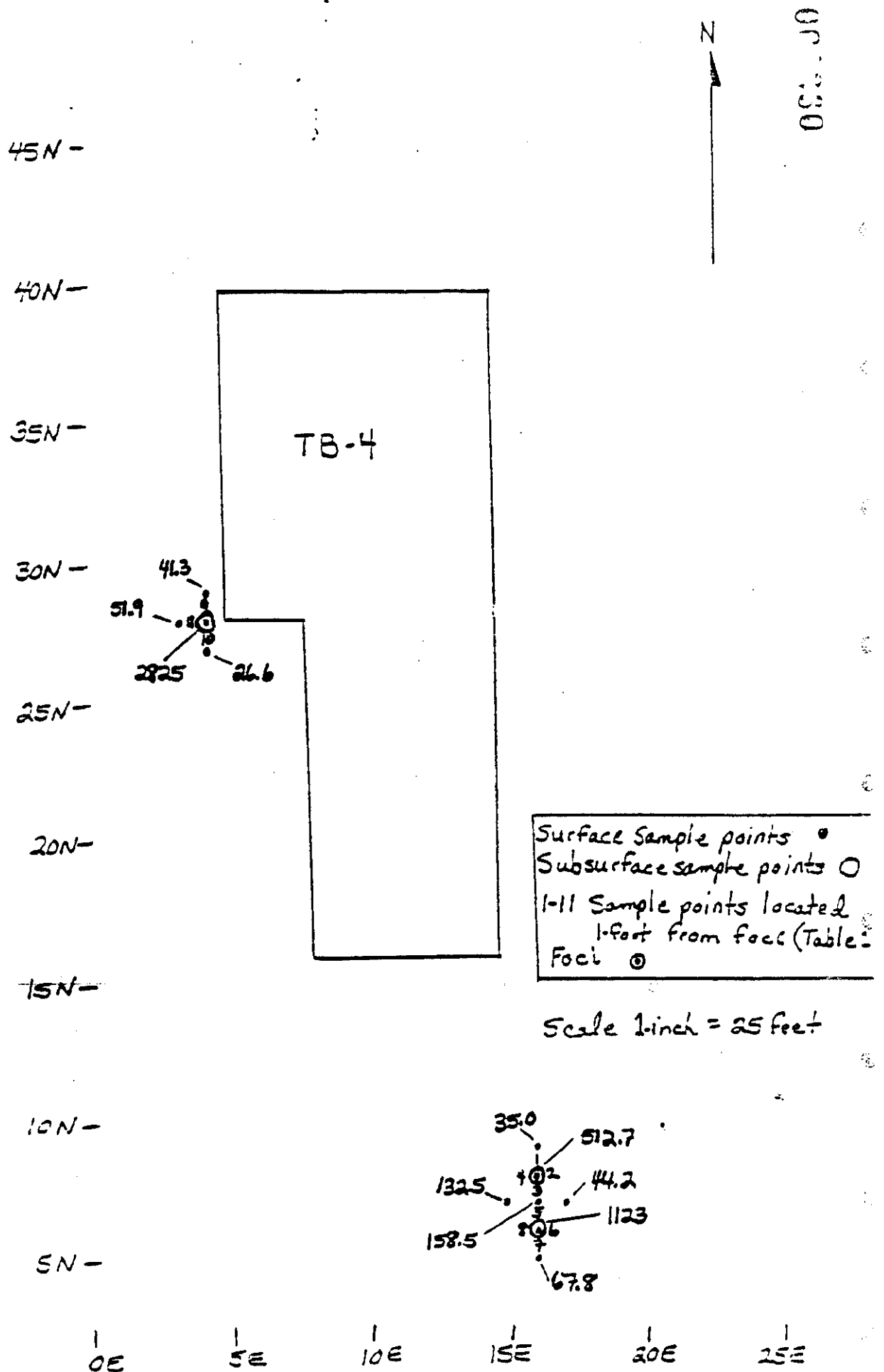


Figure 2- Areas to be excavated.

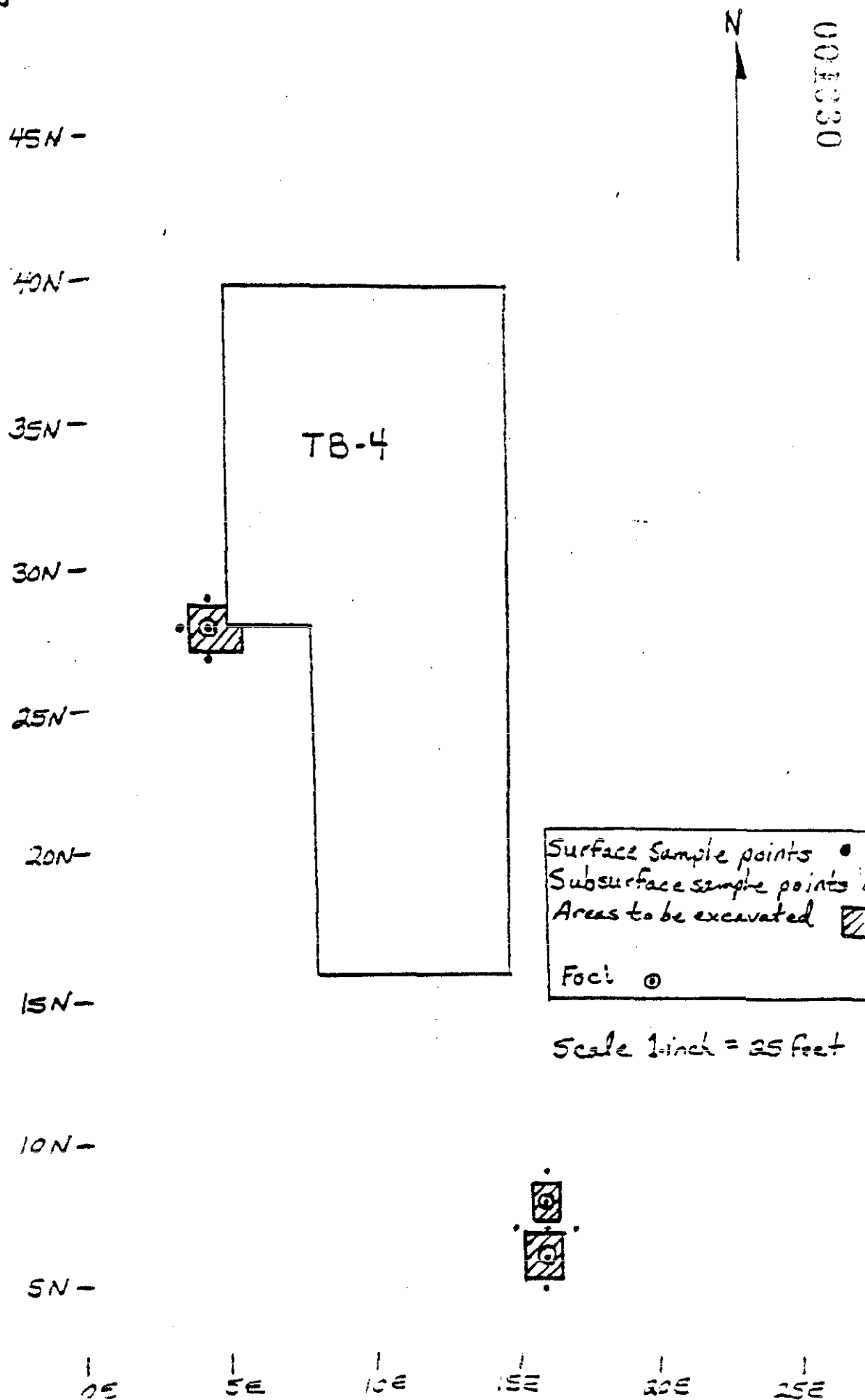


TABLE 1
SURFACE MERCURY SOIL SAMPLE ANALYSIS RESULTS*

SAMPLE CODE		MERCURY CONCENTRATION (ppb)
	5N 16E	67.8
(7)	5.8N 16E	190.5
(8)	6N 15.8E	429.4
	6N 16E	1123.0
(6)	6N 16.2E	117.0
(5)	6.2N 16E	634.3
	7N 15E	132.5
	7N 16E	158.5
	7N 17E	44.2
(3)	7.8N 16E	629.1
(4)	8N 15.8E	174.1
	8N 16E	512.7
(2)	8N 16.2E	123.7
(1)	8.2N 16E	214.8
	9N 16E	35.0
	27N 4E	26.6
(10)	27.8N 4E	1850.0
	28N 3E	51.9
(11)	28N 3.8E	41.2
	28N 4E	2825.0
(9)	28.2N 4E	491.0
	29N 4E	41.3

* The only results listed are from the foci of the contamination. Laboratory analysis was conducted for the whole TB-4 area (Figure 3). However, mercury concentrations below 200 ppb and not near the foci are not listed.

TABLE 2
SUBSURFACE MERCURY SOIL SAMPLE ANALYSIS RESULTS

SAMPLE CODE		MERCURY CONCENTRATION (ppb)
6N	16E - 3 inches	573.6
6N	16E - 6 inches	263.0
6N	16E - 12 inches	95.2
8N	16E - 3 inches	2453.0
8N	16E - 6 inches	1136.0
8N	16E - 12 inches	59.2
28N	4E - 3 inches	532.5
28N	4E - 6 inches	1212.0
28N	4E - 12 inches	179.8

Figure 3- Mercury analysis for TB-4 area.

001330

42 SHEETS 10 SHEETS 1 SQUARE
42 SHEETS 100 SHEETS 1 SQUARE
42 SHEETS 300 SHEETS 1 SQUARE
NATIONAL

Sample analyzed < 200 ppb - •
Sample analyzed > 200 ppb - ⊙

40N

35N

30N

25N

20N

15N

10N

5N

0°

5E

10E

15E

20E

Location of
7th Bin Set

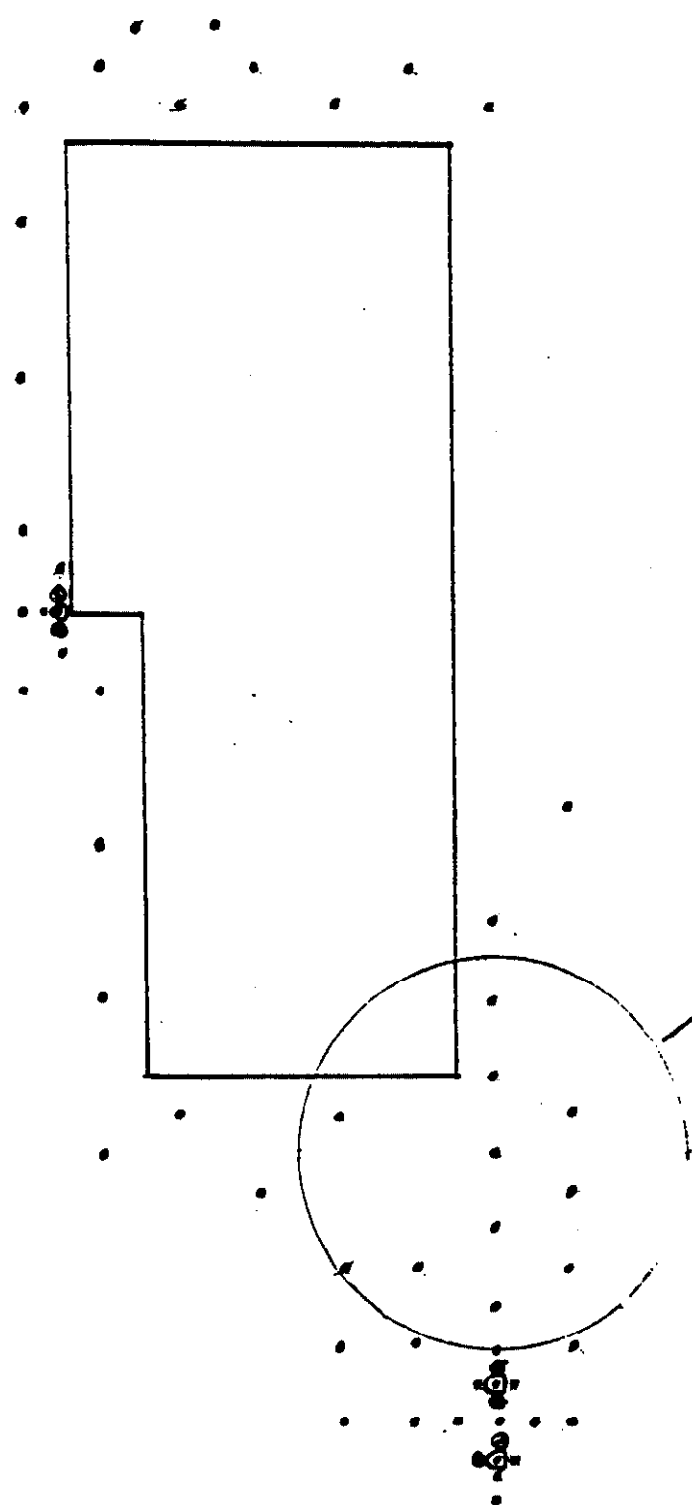


Figure 1 - Location of the mercury-contaminated soil.

45N -

40N -

35N -

30N -

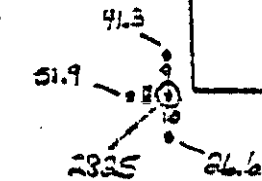
25N -

20N -

15N -

10N -

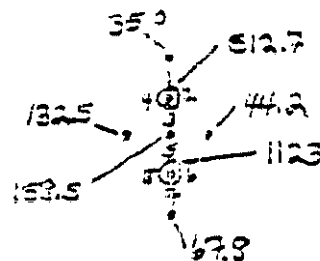
5N -



T8-4

Surface sample points •
Subsurface sample points C
1-11 Sample points located
1-foot from face (Table
Foot) @

Scale 1 inch = 25 feet



0E

5E

10E

15E

20E

25E

001320

62

CPP-62 Spectrochemical Analysis for Mercury (Hg)

Draft

9/7/90

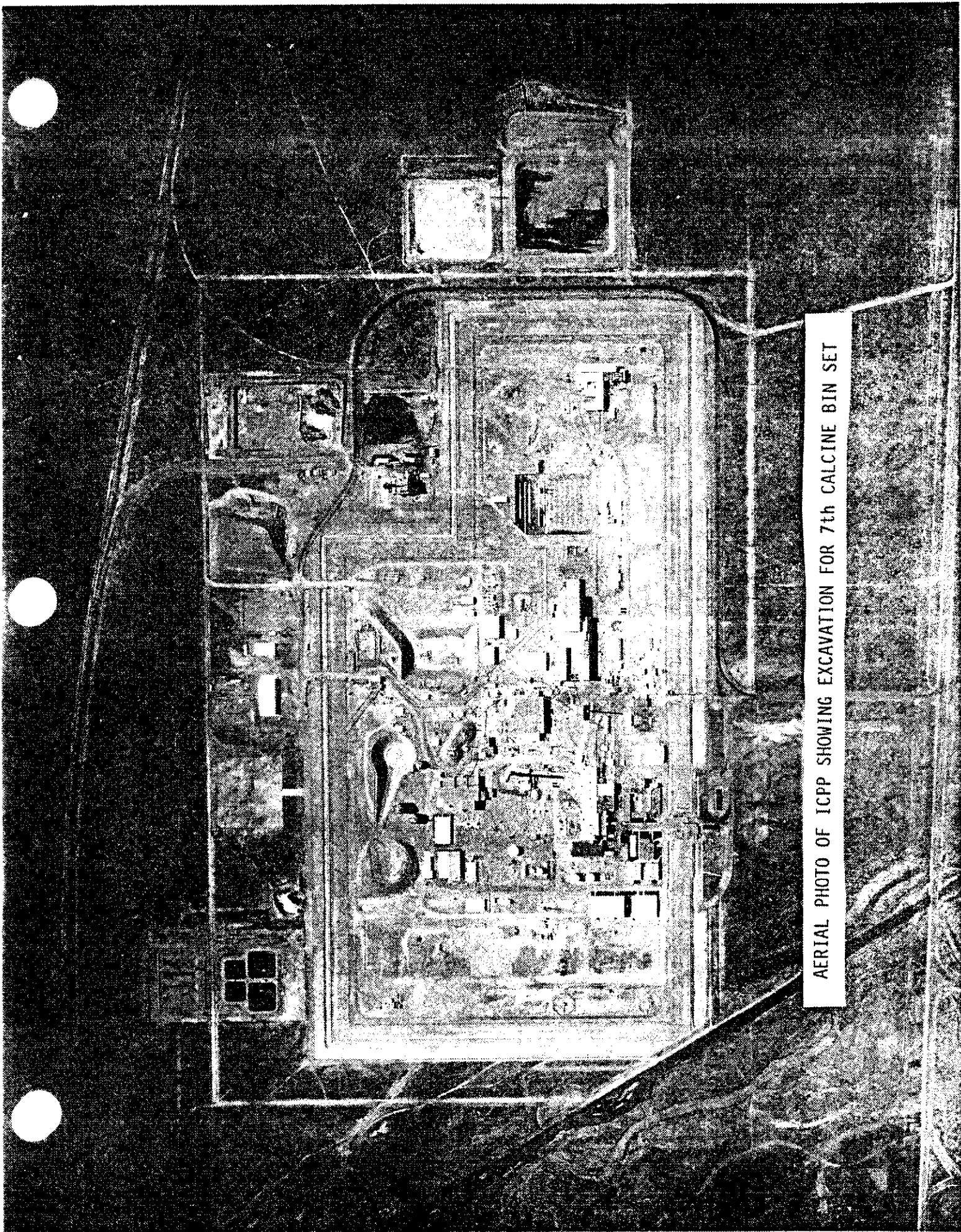
001050

Log Number	SPL. Activity (mR/hr)	Sample Number	Hg (ug/g)	Comments
9/25	85-091910	<0.1	5.8N, 16E	0.1905 Record # = AA-152
9/25	85-091910	<0.1	6N, 15.8E	0.4294 Record # = AA-152
9/25	85-091910	<0.1	6N, 16E	0.1360 Record # = AA-152
9/25	85-091910	<0.1	6N, 16.2E	0.1170 Record # = AA-152
9/25	85-091910	<0.1	6.2N, 16E	0.6343 Record # = AA-152
9/25	85-091910	<0.1	7N, 16E	0.1585 Record # = AA-152
9/25	85-091910	<0.1	7.8N, 16E	0.6291 Record # = AA-152
9/25	85-091910	<0.1	8N, 15.8E	0.1741 Record # = AA-152
9/25	85-091910	<0.1	8N, 16E	0.2866 Record # = AA-152
9/25	85-091910	<0.1	8N, 16.2E	0.1237 Record # = AA-152
9/25	85-091910	<0.1	8.2N, 16E	0.2148 Record # = AA-152
9/25	85-091910	<0.1	27.8N, 4E	1.850 Record # = AA-152
9/25	85-091910	<0.1	28N, 3.8E	0.0412 Record # = AA-152
9/25	85-091910	<0.1	28N, 4E	2.825 Record # = AA-152
9/25	85-091910	<0.1	28.2N, 4E	0.4910 Record # = AA-152
9/25	85-091910	<0.1	6N, 16E 3	0.5736 Record # = AA-152
9/25	85-091910	<0.1	6N, 16E 6	0.2630 Record # = AA-152
9/25	85-091910	<0.1	6N, 16E 12	0.0952 Record # = AA-152
9/25	85-091910	<0.1	8N, 16E 3	2.453 Record # = AA-152
9/25	85-091910	<0.1	8N, 16E 6	1.136 Record # = AA-152
9/25	85-091910	<0.1	8N, 16E 12	0.0592 Record # = AA-152
9/25	85-091910	<0.1	28N, 4E 3	0.5325 Record # = AA-152
9/25	85-091910	<0.1	28N, 4E 6	1.212 Record # = AA-152
9/25	85-091910	<0.1	28N, 4E 12	0.1798 Record # = AA-152
9/10	85-090414	Cold	6N, 16E	1.123 Record # = AA-138
9/10	85-090414	Cold	7N, 14E	0.0770 Record # = AA-138
9/10	85-090414	Cold	7N, 18E	0.0927 Record # = AA-138
9/10	85-090414	Cold	9N, 14E	0.1614 Record # = AA-138
9/10	85-090414	Cold	9N, 18E	0.1327 Record # = AA-138
9/10	85-090414	Cold	10N, 16E	0.1070 Record # = AA-138
9/10	85-090414	Cold	11N, 14E	0.0339 Record # = AA-138
9/10	85-090414	Cold	11N, 18E	0.0438 Record # = AA-138
9/10	85-090414	Cold	13N, 18E	0.1103 Record # = AA-138
9/10	85-090414	Cold	14N, 16E	0.0356 Record # = AA-138
9/17	85-091616	<0.1	5N, 16E	0.0678 Record # = AA-145
9/17	85-091616	<0.1	7N, 15E	0.1325 Record # = AA-145
9/17	85-091616	<0.1	7N, 17E	0.0442 Record # = AA-145
9/17	85-091616	<0.1	9N, 16E	0.0350 Record # = AA-145
9/17	85-091616	<0.1	27N, 4E	0.0266 Record # = AA-145
9/17	85-091616	<0.1	28N, 3E	0.0519 Record # = AA-145
9/17	85-091616	<0.1	29N, 4E	0.0413 Record # = AA-145

RECEIVED
JAN 04 1991

62

Reference 4



AERIAL PHOTO OF ICPP SHOWING EXCAVATION FOR 7th CALCINE BIN SET

86 002- 1- 1

06/22/86

CFA

HIGH ALTITUDE AERIALS

RELEASED FOR EXTERNAL USE

IDAHO NATIONAL ENGINEERING LABORATORY

EG&G PHOTOGRAPHER: DICK GREVILL

Reference 5

ORIGINAL-RETURN TO GENERATOR

64

Reference 6

TRACK-1 RISK EVALUATION SUMMARY

DATE: 1/24/92

SITE: CPP-62

SUMMARY:

A track-1 assessment was conducted to establish risk-based soil screening concentrations to evaluate mercury contamination at CPP-62. The dimensions of the contaminated region evaluated in the track-1 assessment are: 3.66 m wide and 3.66 m long, with a depth of 0.3 m.

The calculation of soil screening concentrations was based on a target risk level representing a hazard quotient of 1 (based on noncarcinogenic effects) or a cancer risk of $1.0E-06$ (based on carcinogenic effects). The evaluation followed the track-1 guidance for the assessment of low probability hazard sites at the INEL (DOE/ID-10340(91)).

A summary table of risk-based soil screening concentrations for mercury is attached. Soil screening concentrations were calculated for both industrial and residential scenarios. The residential scenario considers exposures to individuals living at the site under contaminant conditions that would exist in 100 years (after institutional control). Three potential exposure pathways were evaluated, as applicable to mercury: soil ingestion, inhalation of fugitive dust, and groundwater ingestion (for residential scenario only).

The shaded box in the attached table shows the lowest risk-based soil concentration for mercury. Soil ingestion provided the most significant risk (lowest risk-based screening soil concentration) for mercury.

SUMMARY TABLE OF RISK-BASED SOIL SCREENING CONCENTRATIONS FOR
CPP-62 SOIL CONTAMINATION FOR MERCURY

Exposure	Scenarios			
	Occupational		Residential	
Pathways	Soil Concentration at 1E-06 Risk (mg/kg)	Soil Concentration at HQ = 1 (mg/kg)	Soil Concentration at 1E-06 Risk (mg/kg)	Soil Concentration at HQ = 1 (mg/kg)
Soil Ingestion	--	6.00E+02	--	8.10E+01
Inhalation of Fugitive Dust	--	4.19E+05	--	3.04E+05
Inhalation of Volatiles	NA	NA	NA	NA
Groundwater Ingestion	NA	NA	--	1.97E+02

NA = Not Applicable.

-- = Calculation not performed because of no published toxicity value.

Shaded box = Lowest risk-based soil concentration.